

Adrenal Leiomyoma: A Case Report and Review of the Literature

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We describe a case of a 65-year-old Caucasian woman found to have an enlarging mass of the left adrenal gland. Laboratory examination revealed the mass to be nonfunctional. The patient underwent an uneventful left adrenalectomy. Pathological examination revealed the mass to be a leiomyoma. These tumors are benign and develop from smooth muscle cells. They can occur in any part of the body where smooth muscular layers exist, but occur frequently in the uterus and gastrointestinal tract. This case report presents a review of the recent literature on this rare entity.

J. Surg. Oncol. 1998;69:111–112. © 1998 Wiley-Liss, Inc.

KEY WORDS: adrenal tumors; adrenal mass; endocrine tumors

INTRODUCTION

Adrenal masses are often found during the course of investigation of an unrelated condition. A variety of tumors may arise within the adrenal gland including adrenal cysts, adenomas, lipomas, leiomyomas, osteomas, myelolipomas, hemangiomas, and leiomyosarcomas [1]. Leiomyomas of the adrenal gland are small rare tumors arising from smooth muscle cells. Very few have been reported in the literature. This report is of an enlarging left adrenal mass in a 65-year-old female which was fully resected and found to be an adrenal leiomyoma.

CASE REPORT

In 1994, a 65-year-old woman was discovered to have an incidental left adrenal mass. Initially, the mass was 4.5 cm in greatest diameter, but over 3 years had increased in size to 5.5 cm. She did not have back or abdominal pain. She noted a 15 lb weight gain over the last 12 months. She also admitted to easy bruising and palpitations and gave a history of occasional polydipsia. She had mitral valve prolapse and had a right hip replacement, total abdominal hysterectomy, and a partial nephrectomy with ureteral reconstruction. She had a daughter with Ehlers Danlos syndrome and another daughter with Crohn disease. Physical examination proved unremarkable. Laboratory data were all within normal limits, including a comprehensive endocrinological workup. Her 24-hour urine studies for aldosterone were normal at 7 $\mu\text{g}/24$ hours (2–19). Her 24-hour urine cortisol was normal at

16 $\mu\text{g}/24$ hours (5–47). Her thyroid function tests were normal with a T4 of 6.4 and a thyroid-stimulating hormone (TSH) level of 0.594. A 24-hour urine test for catecholamines was normal and testosterone was normal at 5 pg/ml (1–21). The patient's estradiol was appropriately elevated to 264 by Estraderm.

It was recommended that the patient undergo a left adrenalectomy for an enlarging adrenal mass. She underwent an uneventful left adrenalectomy through a left subcostal incision. Postoperatively, she had an episode of atrial fibrillation on day 3 that resolved with the institution of a beta blocker and Digoxin.

The specimen weighed 61 g. It consisted of a portion of adipose tissue measuring $4 \times 3.5 \times 1$ cm with a $2.0 \times 1.4 \times 0.2$ cm portion of unremarkable appearing adrenal gland adherent to the fat. Also present was an additional portion of tissue which consisted of a white whorled fibrous mass measuring $5.0 \times 3.1 \times 4.2$ cm. This mass was not encapsulated and splayed over the surface of the adrenal tissue. The center of the mass was homogenous and had the general appearance of a myomatous lesion. Microscopically, there were no mitoses identified. Histologically, the process was described as a spindle cell smooth muscle tumor consistent with a leiomyoma.

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Accepted 17 May 1998

DISCUSSION

Leiomyomas are benign tumors which develop from smooth muscle cells. They can occur in any part of the body where smooth muscular layers exist, but occur frequently in the uterus and gastrointestinal tract [1]. Adrenal leiomyomas are a rare entity. Nishida et al. [1] and Goldman and Brody [2] have each reported a case of a symptomatic leiomyoma of the adrenal gland. Evrad et al. [3] incidentally discovered one of these tumors in a boy with ataxia-telangiectasia. There are several reported cases of adrenal leiomyomas in patients with acquired immunodeficiency syndrome (AIDS) [4–7]. With improvements in high-resolution ultrasonography, computed tomography (CT), and magnetic resonance imaging (MRI), many asymptomatic adrenal masses are discovered during the course of investigation of an unrelated condition [8]. Adrenal tumors picked up by incidental abdominal CT scans are functional in less than 10% of the cases. Malignant and hormonally active tumors are treated with resection. In the patient with a nonfunctioning adrenal tumor, the indications for surgery include a diameter greater than 6 cm, growth of the smaller tumors during a period of observation, or ques-

tions of functional status [9]. The prognosis for patients with benign functioning adrenal tumors is generally excellent [9].

REFERENCES

1. Nishida S, Tanimura A, Takasaki S, et al.: Surgically resected adrenal leiomyoma: Report of a case. *Surg Today* 1995;25:455–457.
2. Goldman RL, Brody PA: Symptomatic leiomyoma of the adrenal. *Clin Imaging* 1994; 18:277–278.
3. Evrad P, Vermyle C, Scheift JM, et al.: Leiomyoma of the suprarenal gland in a child with ataxia-telangiectasia. *Pediatr Hematol Oncol* 1991;8:235–241.
4. Parola P, Petit N, Azzedine A, et al.: Symptomatic leiomyoma of the adrenal gland in a woman with AIDS. *AIDS* 1996;10:340–341.
5. Jimenez-Heffernan JA, Hardisson D, Palacios J, et al.: Adrenal gland leiomyoma in a child with AIDS. *Pediatr Pathol Lab Med* 1995;15:923–929.
6. Dahan H, Beges C, Weiss L, et al.: Leiomyoma of the adrenal gland in a patient with AIDS. *Abdominal Imaging* 1994;19:259–261.
7. Radin DR, Kiyabu, M: Multiple smooth muscle tumors of the colon and the adrenal gland in an adult with AIDS. *AJNR* 1992;159:545–546.
8. Gajraj H, Young AE: Adrenal incidentaloma. *Br J Surg* 1993;80:422–426.
9. Greenfield L, Mulholland M, Oldham M, et al.: "Surgery: Scientific Principles and Practice." Philadelphia:Lippincott-Raven, 1997; 1343–1347.